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UNIVERSITY OF TORONTO
DIVISION OF EXTENSION

1966-67

DECISION MAKING IN QUALITY ENGINEERING

Tuesdays **25 Lectures**

The course is designed for those who wish to acquire a working knowledge of the techniques used in making decisions about the quality of processes and products, what affects quality and how it can be economically controlled. The course emphasis is on the application of logical, mathematical and statistical approaches to the solution of practical problems. Although the examples are quality oriented, the techniques are equally applicable to other manufacturing, processing and business problems.

Prerequisites: High school mathematics or equivalent and knowledge of basic probability and statistics or statistical quality control.

LECTURERS: W. A. Sawyer, P.Eng.
Senior Member A.S.Q.C.
C. S. Argyle, P.Eng.
Senior Member A.S.Q.C.

TIME: 7.00 p.m., beginning September 27

PLACE: Room 116, Galbraith Building

FEE: $50.00.

Registration

By mail or in person at Room 201, 84 Queen's Park. Application forms may be obtained by writing Business and Professional Courses, 84 Queen's Park, or by telephoning 928–2393, 928–2394, 928–2395, or 928–2396.

offered in co-operation with the
AMERICAN SOCIETY FOR QUALITY CONTROL

Subjects to be discussed include:

Distributions commonly encountered, such as normal, binomial, Poisson, exponential, t, F, etc.

Decision making from small samples, efficiency and types of errors involved.

Designing and application of sampling plans using attribute, variable and reliability data.

Sequential analysis of attribute, variable and reliability data.

Applications of probability paper, control charts, sampling plans 105 GP–1 and MIL STD 414.

Conditional probability for revision of predictions based on new data.

Introduction to reliability philosophy and analysis.

Regression analysis of inter-related variables.

Nonparametric statistics for comparison and analysis of data from unknown distributions.

Variation analysis for segregating different sources of variation affecting process or product quality.

Course participants are expected to take part in class discussions and class group problems. Homework will be assigned. Each participant is to undertake a project applying one or more of the techniques to the solution of a business problem in his own area of responsibility. An optional examination will be given and the final mark will be based upon the results of the homework, project and examination.